

U.S. Department of Commerce

Date Filed: February 17, 2005

DOCKET NO. 22253-75530
[204688]

APPLN. NO. 10/728,496

APPLICANT: SAHA, et al

FILING DATE: 12/05/2003

GROUP ~~2621~~ 2624

U.S. PATENT DOCUMENTS

Document Number	Date	Name	Class	Subclass	Filing Date if appropriate

FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation Yes/No/Abstract

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, etc.)

/BK/	1.	Aaron, J.E., Makins, N.B., and Sagreiya, K., "The microanatomy of trabecular bone loss in normal aging men and women," <i>Clinical Orthopaedics Related Res.</i> 215:260-271 (1987).
	2.	Bozdek, J.C., and Pal, K., "Fuzzy models for pattern recognition," IEEE Press, New York (1992).
/BK/	3.	Bogomolny, A., "On the perimeter and area of fuzzy sets," <i>Fuzzy Sets Systems</i> 23:257-269 (1987).
/BK/	4.	Borgefors, G., "Distance transformations in arbitrary dimensions," <i>Comput. Vision Graphics Image Process.</i> 27:321-345 (1984).
	5.	Borgefors, "Applications of distance transformations," in Aspects of Visual Form Processing (G. Arcelli, et al., Eds.), pp. 83-108, World Scientific, Singapore (1994).
/BK/	6.	Borgefors, G., "On digital distance transformation in three dimensions," <i>Comput. Vision Image Understanding</i> 64:368-376 (1996).
/BK/	7.	Bradbeer, J.N., Arlot, M.E., Meunier, P.J., Reeve, J., "Treatment of osteoporosis with parathyroid peptide (hPTH 1-34) and oestrogen: increase in volumetric density of iliac cancellous bone may depend on reduced trabecular spacing as well as increased thickness of packets of newly formed bone," <i>Clin. Endocrinol. (Oxf)</i> 37:282-289 (1992).
/BK/	8.	Dalle Carbonare, L., Arlot, M.E., Chavassieux, P.M., Roux, J.P., Portero, N. R., Meunier, P.J., "Comparison of trabecular bone microarchitecture and remodeling in glucocorticoid-induced and postmenopausal osteoporosis," <i>J. Bone Miner. Res.</i> 16:97-103 (2001).
	9.	Chavassieux, P., Arlot, M., and Meunier, P., "Clinical use of bone biopsy," in Osteoporosis, 2, (Marcus, Feldman, and Kelsey, Eds.) New York: Academic Press, pp. 501-509 (2001).
	10.	Cho, Z.H., Jones, J.P., and Sing, M., Foundations of Medical Imaging, Wiley, New York (1993).
/BK/	11.	Danielsson, P.E., "Euclidean distance mapping," <i>Comput. Graphics Image Process.</i> 14:227-248 (1980).
	12.	Fu, K.S., and Rosenfeld, A., "Pattern recognition and image processing," <i>IEEE Trans. Comput.</i> 25:1336-1346 (1976).
	13.	Hildebrand, T., and Ruegsegger, P., "A new method for the model independent assessment of thickness in three-dimensional images," <i>J. Microscopy</i> 185:67-75 (1997).
	14.	Hwang, S.N., and Wehrli, F.W., "Estimating voxel volume fraction of trabecular bone on the basis of magnetic resonance images acquired in vivo," <i>Internat. J. Imaging Systems Tech.</i> 10:186-198 (1999).
	15.	Kaufmann, A., "Introduction to the Theory of Fuzzy Subsets," Vol. 1, Academic Press, New York (1975).
	16.	Kong, T.Y., Roscoe, A.W., and Rosenfeld, A., "Concepts of digital topology," <i>Topology Appl.</i> 46:219-262 (1992).
	17.	Ma, J., Wehrli, F.W., and Song, H.K., "Fast 3D large-angle spin-echo imaging (3D FLASE)," <i>Magnet. Reson. Med.</i> 35:903-910 (1996).
	18.	Pal, N.R., and Pal, S.K., "A review of image segmentation techniques," <i>Pattern Recog.</i> 26:1277-1294 (1993).
	19.	Parfitt, M., Mathews, C. H. E., Villanueva, A. R., Kleerekoper, M., Rame, B., and Rao, D. S., "Relationships between surface, volume, and thickness of iliac trabecular bone in aging and in osteoporosis. Implications for the microanatomic and cellular mechanisms of bone loss," <i>J. Clin. Invest.</i> 72:1396-409 (1983).
/BK/	20.	Pizer, S.M., Eberly, D., Fritsch, D.S., and Morse, B.S., "Zoom-invariant vision of figural shape: The mathematics of cores," <i>Comput. Vision Image Understanding</i> 69:55-71 (1998).

/BK/	21.	Pothuau, L., Porion, P., Lespessailles, E., Benhamou, C.L., and Levitz, P., "A new method for three-dimensional skeleton graph analysis of porous media: application to trabecular bone microarchitecture", <i>J. Microsc.</i> 199:149-161 (2000).
	22.	Press, W.H., Flannery, B.P., Teukolsky, S.A., and Vetterling, W.T., "Numerical Recipes: The Art of Scientific Computing," Cambridge, London: Cambridge University Press (1986).
/BK/	23.	Rosenfeld, and Pfaltz, J., "Distance functions in digital pictures," <i>Pattern Recog.</i> 1:33-61 (1968).
	24.	Rosenfeld, "The diameter of a fuzzy set," <i>Fuzzy Sets Systems</i> 13:241-246 (1984).
	25.	Rosenfeld, "The fuzzy geometry of image subsets," <i>Pattern Recog. Lett.</i> 2:311-317 (1991).
	26.	Rosenfeld, "Fuzzy digital topology," <i>Inform. Control</i> 40:76-87 (1979).
	27.	Rueggsegger, P., Koller, B., and Muller, R., "A. microtomographic system for the nondestructive evaluation of bone architecture," <i>Calcified Tissue International</i> 58:24-29 (1996).
	28.	Saha, P.K., Udupa, J.K., and Odhner, D., "Scale-based fuzzy connected image segmentation: Theory, algorithms, and validation," <i>Comput. Vision Image Understanding</i> 77:145-174 (2000).
	29.	Saha, P.K., Chaudhuri, B.B., and Dutta Majumder, D., "A new shape preserving parallel thinning algorithm for 3D digital images," <i>Pattern Recog.</i> 30:1939-1955 (1997).
	30.	Saha, P.K., Udupa, J.K., and Abrahams, J.M., "Automatic bone-free rendering of cerebral aneurysms via 3D-CTA," in <i>Proceedings of SPIE: Medical Imaging, San Diego, CA</i> , 4322:1264-1272 (2001).
	31.	Saha, P.K., Gomberg, B.R., and Wehrli, F.W., "A novel theory and algorithm of fuzzy distance transform and its applications," in <i>Proceedings of SPIE: Medical Imaging, San Diego, CA</i> , 4684:134-145 (2002).
	32.	Saha, P.K., Wehrli, F.W., and Gomberg, B.R., "Fuzzy distance transform - theory, algorithms, and applications," <i>Computer Vision and Image Understanding</i> 86:171-190 (2002).
	33.	Saha, P.K., and Chaudhuri, B.B., "3D Digital topology under binary transformation with applications," <i>CVGIP: Image Understanding</i> 63:418-429 (1996).
↓	34.	Saha, P.K., Chaudhuri, B.B., and Dutta Majumder, D., "A new shape preserving parallel thinning algorithm for 3D digital images," <i>Pattern Recognition</i> 30:1939-1955 (1997).
/BK/	35.	Saha, P.K., and Chaudhuri, B.B., "Detection of 3D simple points for topology preserving transformation with application to thinning," <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> 16:1028-1032 (1994).
	36.	Serra, T., "Image Analysis and Mathematical Morphology," Academic Press, San Diego (1982).
	37.	Sonka, M., Hlavac, V., and Boyle, R., "Image Processing, Analysis, and Machine Vision," 2nd ed., PWS Publishing, Brooks/Cole, Pacific Grove, CA (1999).
/BK/	38.	Song, H.K., and Wehrli, F.W., "In vivo micro-imaging using alternating navigator echoes with applications to cancellous bone structural analysis," <i>Magnet. Reson. Med.</i> 41:947-953 (1999).
↓	39.	Srihari, S.N., and Udupa, J.K., "Understanding the bin of parts," in <i>Proceedings of International Conference on Cybernetics and Society, Denver, Colorado</i> , pp. 44-49 (1979).
↓	40.	Takahashi, M., Wehrli, F.W., Hilaire, L., Zemel, B.S., and Hwang, S.N., "In vivo NMR microscopy allows short-term serial assessment of multiple skeletal implications of corticosteroid exposure," <i>Proc. Natl. Acad. Sci. USA</i> 19:19 (2002).
↓	41.	Tsao, Y. and Fu, K.S., "A parallel thinning algorithm for 3D pictures," <i>Comput. Graphics Image Process.</i> 17:315-331 (1981).
/BK/	42.	Udupa, J.K., and Samarasekera, S., "Fuzzy connectedness and object definition: theory, algorithms, and applications in image segmentation," <i>Graphical Models Image Process.</i> 58:246-261 (1996).
	43.	Udupa, J.K., and Herman, G.T.E., (eds.), 3D Imaging in Medicine, CRC Press, Boca Raton, FL (1991).
/BK/	44.	J.K. Udupa and D. Odhner, "Shell rendering," <i>IEEE Comput. Graphics Appl.</i> 13(6):58-67 (1993).
/BK/	45.	Udupa, J.K., Odhner, D., Samarasekera, S., Goncalves, R.J., Iyer, K., Venugopal, K., and Furuie, S., "3DVIEWNIX: A open, transportable, multidimensional, multimodality, multiparametric imaging system," <i>Proc. SPIE</i> 2164:58-73 (1994).
/BK/	46.	Wehrli, F.W., Saha, P. K., Gomberg, B.R., Song, H.K., Snyder, P.J., Benito, M., Wright, A., and Weening, R., "Role of magnetic resonance for assessing structure and function of trabecular bone," <i>Topics in Magnetic Resonance Imaging</i> 13:335-356 (2002).
	47.	Weinstein, E.W., CRC Concise Encyclopedia of Mathematics, Chapman & Hall/CRC, Boca Raton, FL (1999).
/BK/	48.	Wu, Z., Chung, H., and Wehrli, F.W., "A Bayesian approach to subvoxel tissue classification in NMR microscopic images of trabecular bone," <i>Magnetic Res. Med.</i> 31:302-308 (1994).
Examiner Signature: /Bernard Krasnic/		Date Considered: 04/06/2007

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).
PTO-1449.doc